

No.

200200262



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## NSA Research Foundation

Whereas, THERE HAS BEEN PRESENTED TO THE

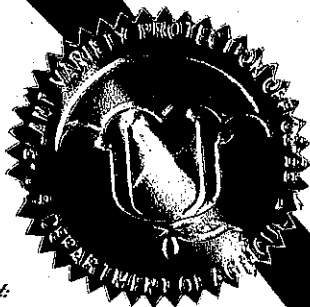
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED, (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'RG200RR'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this thirteenth day of September, in the year two thousand and four.

Attest:

*[Signature]*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*[Signature]*

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICEAPPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER NDSU Research Foundation		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME ND90-2624RR		3. VARIETY NAME RG200RR	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 1735 NDSU Research Park Drive PO Box 5002 Fargo, ND 58105-5002		5. TELEPHONE (include area code) (701) 231-8931		FOR OFFICIAL USE ONLY PVPO NUMBER 200200262	
6. FAX (include area code) (701) 231-6661		7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) 501 (C) 3 Coporation		8. IF INCORPORATED, GIVE STATE OF INCORPORATION North Dakota	
9. DATE OF INCORPORATION May, 1989		10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Theodore C. Helms Dept. of Plant Sciences North Dakota State University Fargo, ND 58105-5051		FILING DATE 9/4/2002	
11. TELEPHONE (include area code) (701) 231-8136		12. FAX (include area code) (701) 231-8474		FILING AND EXAMINATION FEES: \$ 2705.00 DATE 9/12/2002 CERTIFICATION FEE: \$ 432.00 DATE 8/16/04	
13. E-MAIL dzetocha@ndsuent.nodak.edu ted.helms@ndsu.nodak.edu		14. CROP KIND (Common Name) soybean		15. GENUS AND SPECIES NAME OF CROP Glycine max	
16. FAMILY NAME (Botanical) Leguminasae		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)	
19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act. <input checked="" type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "no", go to item 22)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? IF YES, SPECIFY THE <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED NUMBER 1,2,3, etc. (If additional explanation is necessary, please use the space indicated on the reverse.)	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)		24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.	
SIGNATURE OF OWNER Dale Zetocha		SIGNATURE OF OWNER		NAME (Please print or type) Dale Zetocha	
CAPACITY OR TITLE Executive Director NDSU Research Foundation		DATE 9/9/02		CAPACITY OR TITLE DATE	

**GENERAL:** To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. **Retain one copy for your files.** All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**Plant Variety Protection Office**

**Telephone: (301) 504-5518**

**FAX: (301) 504-5291**

**Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>**

**ITEM**

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
  - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

**21. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

**22. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Sold March 28, 2002 in the U.S. as Foundation seed.

**23. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

**Traill** soybean variety has a pending U.S. PV Application No. 9700293 filed on May 5, 1997 and owned by the NDSU Research Foundation. U.S. Patent Application #476008, Patent #5,627,061; issued May 6, 1997 owned by Monsanto.

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (07-01) designed by the Plant Variety Protection Office with WordPerfect 9.0. Replaces STD-470 (04-01) which is obsolete.

## Exhibit A

## Origin and Breeding History of the Cultivar RG200RR

RG200RR, tested as ND no. 90-2426(RR), was derived from the cross Traill\*3//Council/Resnick. Resnick was the source of the glyphosate resistance allele. Resnick was provided by Monsanto Corporation. The glyphosate resistant isoline of Resnick was developed by using Resnick as a recurrent parent and the Monsanto line 40-3-2 was the donor parent. 40-3-2 was transformed by using a glyphosate resistant allele as part of a construct. The cross of Council/Resnick was made in the summer of 1996 at the Fargo, ND nursery. Traill was first crossed to Council/Resnick in the summer of 1997 at the Fargo, ND nursery. The first backcross to Traill was conducted in the 1997-1998 winter using a growth chamber. The second backcross to Traill was conducted in the spring of 1998 using a growth chamber. The third backcross to Traill was conducted in the summer of 1998 at the Fargo, ND nursery. The  $BC_3F_1$  plants were grown in the greenhouse in the 1998-1999 winter season.  $F_2$  plants were grown in the spring of 1999 in the greenhouse and seed of each  $F_2$  plant was harvested separately to form 88  $F_{2.3}$  purification rows. These  $F_{2.3}$  purification rows were grown in the summer of 1999 at the Casselton, ND nursery and sprayed with glyphosate herbicide. RG200RR was selected for resistance to glyphosate herbicide. Of the 88  $F_{2.3}$  purification rows evaluated for glyphosate resistance, 14 were uniformly resistant to glyphosate herbicide. These 14 rows were harvested in the fall of 1999 and the seed of these rows was sent to the 1999-2000 Chile winter nursery for winter increase. In the 1999-2000 winter nursery the Breeder seed was increased and sprayed with glyphosate herbicide. ND90-2624(RR) was first tested in replicated yield trials in the year 2000. Foundation seed was increased in the summer of 2000 at the Casselton and Carrington, ND locations. RG200RR was released January 17, 2002 as an  $F_6$  pure line soybean cultivar. Variants include: 0.1% plants susceptible to glyphosate; 0.6% plants with grey pubescence; 0.6% seeds with black, or brown hila. Twenty different fields were evaluated in 2002 for variants and the percent of variants was uniform and stable across these 20 samples. RG200RR has been observed over a period of three years to be uniform and stable within the proportion of variants described, and for all other characteristics described within the applications. (BT:6/4/2004 as authorized by the application's representative).  
(customer's)

**Exhibit B****Novelty Statement**

1. RG200RR was developed primarily for high yield, suitable maturity, iron-deficiency chlorosis tolerance on high pH soils and tolerance to glyphosate herbicide. RG200RR is morphologically different than the recurrent parent which is Traill.

**Note: RG200RR is most similar to Traill (per applicant's authorization, C# 6/4/2004).**

2. Traill has purple flowers, tawny pubescence, brown pod color at maturity, intermediate seed coat luster, imperfect yellow hila, and indeterminate growth habit, but is not tolerant to glyphosate herbicide. RG200RR has purple flowers, tawny pubescence, brown pod color at maturity, intermediate seed coat luster, imperfect yellow hila, indeterminate growth habit and tolerance to glyphosate herbicide. In the winter of 2001, 100 seedlings each of Traill and RG200RR were planted and sprayed with glyphosate herbicide. All 100 plants of the Traill cultivar were prematurely killed by glyphosate herbicide and all 100 plants of RG200RR survived the glyphosate herbicide applied under greenhouse condititons.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705**

**EXHIBIT C  
(Soybean)**

**OBJECTIVE DESCRIPTION OF VARIETY  
SOYBEAN (*Glycine max* (L.) Merr.)**

NAME OF APPLICANT(S) NDSU Research Foundation  ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)  P.O. Box 5014 Fargo, ND 58105-5014	PVPO NUMBER
	<b>200200262</b>
	VARIETY NAME
	RG200RR
TEMPORARY OR EXPERIMENTAL DESIGNATION (important if one exists)	
align="center">ND90-2624 (RR)	

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in the first box (e.g. 

9	9	9
---	---	---

 or 

0	9
---	---

) when number is either 99 or less or 9 or less respectively. Data for quantitative

plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal

Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:

Please answer all questions for your variety; lack of response may delay progress of your application.

**A. MORPHOLOGY**

**Seed Shape:**

<table border="1"><tr><td>4</td></tr></table>	4	1 = Spherical (L/W, L/T, and T/W ratios < 1.2)	2 = Spherical-Flattened (L/W ratio > 1.2; L/T ratio < 1.2)
	4		
3 = Elongate (L/T ratio > 1.2; T/W ratio < 1.2)	4 = Elongate-Flattened (L/T ratio > 1.2; T/W ratio > 1.2)		

**Seed Coat Color:**

<table border="1"><tr><td>1</td></tr></table>	1	1 = Yellow	2 = Green	3 = Brown	4 = Black	5 = Other (Please Specify)
1						

**Seed Coat Luster:**

<table border="1"><tr><td>1</td></tr></table>	1	1 = Dull	2 = Shiny
1			

**Seed Size:**

<table border="1"><tr><td>1</td><td>6</td></tr></table>	1	6	grams/100 seeds
1	6		

**Hilum Color:**

<table border="1"><tr><td>2</td></tr></table>	2	1 = Buff	2 = Yellow	3 = Brown	4 = Gray	5 = Imperfect Black
	2					
6 = Black	7 = Other (Please Specify)					

## A. MORPHOLOGY (Continued)

## Cotyledon Color:

 1 = Yellow      2 = Green

## Seed Protein Peroxidase Activity:

 1 = Low      2 = High

## Hypocotyl Color:

<input type="text" value="4"/> 1 = Green ( 'Evans' or 'Davis' )	2 = Green with Bronze Bands below Cotyledon ( 'Woodworth' or 'Tracy' )	3 = Light Purple below Cotyledons ( 'Beeson' or 'Pickett 71' )	4 = Dark Purple extending to unifoliolate leaves ( 'Hodgson', 'Coker', or 'Hampton 266A' )
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## Leaflet Shape:

 1 = Lanceolate      2 = Oval      3 = Ovate      4 = Other (Please Specify)

## Flower Color:

 1 = White      2 = Purple      3 = White with a Purple Throat

## Pod Color:

 1 = Tan      2 = Brown      3 = Black

## Pubescence Color:

 1 = Gray      2 = Brown (Tawny)      3 = Light Tawny

## Plant Habit:

 1 = Determinate      2 = Semi - Determinate      3 = Indeterminate      4 = Intermediate

## Maturity Group:

<input type="text" value="0"/> <input type="text" value="3"/>	1 = 000 6 = III 11 = VIII	2 = 00 7 = IV 12 = IX	3 = 0 8 = V 13 = X	4 = I 9 = VI 14 = XI	5 = II 10 = VII 15 = XII
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## Maturity Subgroup:

 Please enter a value from 0 - 9

## B. DISEASE REACTIONS

0 = Not Tested

1 = Susceptible

2 = Resistant

3 = Tolerant

## Bacterial

 Bacterial Pustule (*Xanthomonas campestris* pv. *glycines* (Nakano) Dye)

 Bacterial Blight (*Pseudomonas syringae* pv. *glycinea* (Coerper) Young, Dye, & Wilkie)

 Wildfire Blight (*Pseudomonas syringae* pv. *tabaci* (Wolf & Foster) Young, Dye, & Wilkie)

## B. DISEASE REACTIONS (Continued)

0 = Not Tested

1 = Susceptible

2 = Resistant

3 = Tolerant

## Fungal

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 Brown Spot (*Septoria glycines* Hemmi)Frogeye Leaf Spot (*Cercospora sojina* Hara) race 1 race 2 race 3 race 4 race 5 race 6 Other (Please Specify) Target Spot (*Corynespora cassiicola* (Berk. & Curt.) Wei) Downey Mildew (*Peronospora trifoliorum* var. *manchurica* (Naum.) Syd. ex Gäum) Powdery Mildew (*Microsphaera diffusa* Cke. & Pk.) Brown Stem Rot (*Phialophora gregata* (Allington & Chamberlain) W. Gams.) Stem Canker (*Diaporthe phaseolorum* (Cke. & Ell.) Sacc. var. *caulivora* Athow & Caldwell) Pod and Stem Blight (*Diaporthe phaseolorum* (Cke. & Ell.) Sacc. var. *sojae* (Lehman) Wehm.) Purple Seed Stain (*Cercospora kikuchii* (T. Matsu. & Tomoyasu) Gardener) Rhizoctonia Root Rot (*Rhizoctonia solani* Kühn)Phytophthora Root Rot (*Phytophthora megasperma* Drechs. f. sp. *glycinea* (Kuan & Erwin)) race 1 race 8 race 15 race 22 race 2 race 9 race 16 race 23 race 3 race 10 race 17 race 24 race 4 race 11 race 18 race 25 race 5 race 12 race 19 race 26 race 6 race 13 race 20 Other (Please Specify) race 7 race 14 race 21 Bud Blight (Tobacco Ringspot Virus) Yellow Mosaic (Bean Yellow Mosaic Virus)



**B. DISEASE REACTIONS** (*Continued*)

0 = Not Tested

1 = Susceptible

2 = Resistant

3 = Tolerant

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Cowpea Mosaic (Cowpea Chlorotic Virus)

Pod Mottle (Bean Pod Mottle Virus)

Seed Mottle (Soybean Mosaic Virus)

**Nematode**

**Soybean Cyst Nematode** (*Heterodera glycines* Ichinohe)

race 1

race 2

race 3

race 4

race 5

race 6

race 9

race 14

Other (*Please Specify*)

Lance Nematode (*Hoplolaimus columbus* Sher)

Southern Root Knot Nematode (*Meloidogyne incognita* (Kofoid & White) Chitwood)

Northern Root Knot Nematode (*Meloidogyne hapla* Chitwood)

Peanut Root Knot Nematode (*Meloidogyne arenaria* (Neal) Chitwood)

Reniform Nematode (*Rotylenchus reniformus* Linwood & Olivera)

Javanese Nematode (*Meloidogyne javanica* (Treub) Chitwood)

Other Nematode (*Please Specify*)

**C. PHYSIOLOGICAL RESPONSES**

0 = Not Tested

1 = Susceptible

2 = Resistant

3 = Tolerant

Iron Chlorosis on Calcareous Soil

Phosphorus

Other (*Please Specify*) \_\_\_\_\_

Boron

Aluminum

Salt

Drought

**D. INSECT REACTIONS**

0 = Not Tested

1 = Susceptible

2 = Resistant

3 = Tolerant

 Mexican Bean Beetle (*Epilachna varivestis* Mulsant) Potato Leaf Hopper (*Empoasca fabae* (Harris)) Other (Please Specify)

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**E. HERBICIDE REACTIONS**

0 = Not Tested

1 = Susceptible

2 = Resistant

 Metribuzin Sulfonylurea Glyphosate Glufosinate Sulfentrazone Other (Please Specify)**F. TRANSGENIC COMPOSITION**

Has the development of the subject variety included the insertion of genetic material from an organism other than a soybean, or, the removal of genetic material from the application variety?

If yes, please complete the following information requests\*. Use additional pages if necessary.

YES

NO

1. Please state the vector's name:

☒☐

2. Please state the vector components:

3. Please describe the genetic material successfully transferred into the subject variety:

4. Please describe the insertion protocol:

\* A literature citation(s) explaining the four information requests above may be an acceptable alternative to completion of the "Transgenic Composition" portion of this form.

Padgett, S.R., et al. 1995. Development, identification and characterization of a Glyphosate-tolerant soybean line. Crop Sci. 35:1451-1461.

**G. BIOCHEMICAL MARKERS**

Please describe any biochemical information here, which you believe will be helpful in further describing the subject variety (e.g. Simple Sequence Repeats, Restriction Fragment Length Polymorphisms, Isozymic Characterization). Use additional pages if necessary.

RG200RR is a backcross derived version of cv Traill. Three backcrosses were made to the recurrent parent which was Traill. A greenhouse test was conducted to compare glyphosate resistance of RG200RR to that of Traill. All 100 seedlings of RG200RR survived application of 64 oz/acre rate of glyphosate and all 100 seedlings of Traill were killed due to application of glyphosate.

The NDSU Research Foundation has both a Research Agreement as well as a Commercialization Agreement to use and market glyphosate resistance as Roundup Ready soybeans.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S) NDSU Research Foundation		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER ND90-2624RR	3. VARIETY NAME 'RG200RR'
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) c/o Executive Director PO Box 5002 1735 NDSU Research Park Drive Fargo, ND 58105-5002		5. TELEPHONE (include area code) (701) 231-8931	6. FAX (include area code) (701) 231-6661
7. PVPO NUMBER <b>200200262</b>			
8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. The RG200RR variety contains Monsanto's Roundup Ready gene. The NDSU Research Foundation has permission to use this gene via a commercialization agreement with Monsanto. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
9. Is the applicant (individual or company) a U.S. national or U.S. based company? If no, give name of country <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
10. Is the applicant the original owner? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If no, please answer one of the following: a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country			
11. Additional explanation on ownership (if needed, use reverse for extra space): See additional Exhibit E Statement on the Basis of the applicant's ownership included in the application.			

**PLEASE NOTE:**

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

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**Exhibit E****Statement of the basis of applicant's ownership**

Dr. Theodore Helms, an employee of the North Dakota Agricultural Experiment Station and North Dakota State University, is the plant breeder who developed 'RG200RR', the soybean cultivar for which Plant Variety Protection is hereby sought. The employee by agreement and because of the conditions of the use of the facilities and funds of the North Dakota Agricultural Experiment Station and North Dakota State University has assigned all ownership rights to 'RG200RR' soybean to the North Dakota Agricultural Experiment Station and North Dakota State University.

North Dakota State University on behalf of the North Dakota Agricultural Experiment Station has assigned ownership to the NDSU Research Foundation. The NDSU Research Foundation is a nonprofit corporation set up to own and manage the intellectual property of North Dakota State University